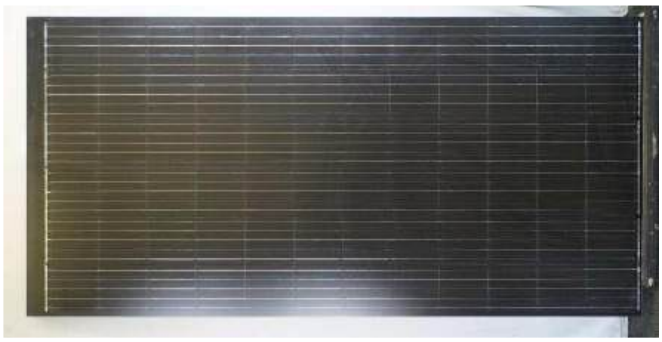
Prüfbericht-Nr.: *Test report no.*:	**US259W5Z 002**	**Auftrags-Nr.:** *Order no.*:	234232378	
Kunden-Referenz-Nr.: *Client reference no.*:	2692015	**Auftragsdatum:** *Order date:*	19/08/2025	

Hersteller: *Manufacturer*:	Mitrex 41 Racine Road Etobicoke, ON M9W 2Z4, Canada Attn: Travis Yeow Travis.y@mitrex.com
Prüfgegenstand: *Test item*:	Photovoltaic (PV) module
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	M370-CL01F612 (E-Facade Solar Panels) M370-CL01F612 (Honeycomb Solar Panels)
Auftrags-Inhalt: *Order content*:	Detection of Potential-Induced Degradation (PID) as per IEC TS 62804-1:2025 Dust and Sand test as per IEC 60068-2-68 Cyclic Salt Mist Exposure IAW IEC 61701 (2011) Moist Ammonia Exposure IAW IEC 62716 (2013)
Prüfgrundlage: *Test specification*:	Photovoltaic (PV) modules # IEC TS 62804-1:2025 # IEC 60068-2-68 Section La2 # IEC 61701 / IEC 60068-2-52
Wareneingangsdatum: *Date of sample receipt*:	2025-10-22 2025-10-15 2025-10-09
Prüfmuster-Nr.: *Test sample no:*	See clause 6
Prüfzeitraum: *Testing period*:	27/10/2025 - 24/01/2026
Ort der Prüfung: *Place of testing*:	Koln, Germany Tempe - AZ, USA Ridgway - PA, USA
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland of North America
Prüfergebnis*: *Test result**:	Siehe Sonstiges / See Other



geprüft von: *compiled by:* Mat Kuitche	**genehmigt von:** *authorized by*: May Wang / Christos Monokroussos
Datum: *Date:* 03/02/2026	**Ausstellungsdatum:** *Issue date:* 04/02/2026
Stellung / Position: Expert	**Stellung** / Position: Reviewer

Sonstiges / *Other*:	The PID were passed in accordance with the pass criteria specified in IEC 61215-2:2021 No visual anomalies noted after sand & dust test Spotting and white corrosion observed after cyclic salt mist exposure
Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery*:	Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Anmerkungen
Remarks

A	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. *The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.*
B	Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. *As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and is unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged.*
C	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. *Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report.* *Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.*
D	Die Messunsicherheit der in diesem Prüfbericht aufgeführten Messverfahren wird nicht in die Einhaltung der jeweiligen Grenzwerte / Betriebsbedingungen mit einbezogen. *The measurement uncertainly of the measurement procedures listed in this test report does not include the compliance of the respective limit values / operating conditions.*
E	Sofern mit dem Kunden keine abweichende Regelung getroffen wurde, wird eine Konformitätsbewertung grundsätzlich auf Basis der angewendeten Normen durchgeführt. Auf Kundenwunsch wird die Aussage zur Konformität des in diesem Prüfbericht geprüften Produktes nach den Kriterien / Anforderungen der angewendeten Normen durchgeführt. Davon abweichende Bewertungs-bedingungen werden in den jeweiligen Kapiteln gesondert dokumentiert. *Unless oherwise agreed with the customer, a conformity assessment is always carried out based on the applied standards.* *At the customer´s request, the statement on the conformity of the product tested in this test report is carried out according to the criteria / requirements of the applied standards.*

Produktbeschreibung
Product description

I	**General**
1	**Product details** M370-CL01F612 (E-Facade Solar Panels) M370-CL01F612 (Honeycomb Solar Panels) M030-CL01F203 (E-Facade Solar Panels) M030-CL01F203 (Honeycomb Solar Panels) These are Building-Integrated Photovoltaic (BIPV) solar module with monocrystalline silicon solar cells.
2	**Used materials** Unknown material composition
3	**Address(es) of the manufacturing site(s)** No factory inspection was performed
4	**Other(s)** Test sample(s), as well sample information, description, product details and intended usage was provided by customer.
5	**Test sample obtaining** ☒ Sent by customer ☐ Sampling by TUV Rheinland Group ☐ Others:

6	**Summary of test results**

1. Detection of Potential-Induced Degradation (PID) as per IEC TS 62804-1:2025
Testing performed by TUV Rheinland Germany

Four samples were received for testing Detection of Potential-Induced Degradation (PID) as per IEC TS 62804-1:2025 — PID-Shunting Test Procedure, representing two different frame designs but sharing an identical bill of materials. The samples consisted of:

- Honeycomb Solar Panels (M370-CL01F612) with honeycomb frames – 2 samples
- E-Facade Solar Panels (M370-CL01F612) with invisible black aluminum frames – 2 samples

According to the standard, two modules per polarity shall be tested per design: two for positive voltage (+V) and two for negative voltage (-V). As confirmed by the client, PID detection was analyzed for two module types by deviating from the standard testing procedure and applying both positive and negative voltages to each frame type. The sample allocation was as follows:

Positive Voltage Testing:

- 1 × Honeycomb panel
- 1 × E-Facade panel

Negative Voltage Testing:

- 1 × Honeycomb panel
- 1 × E-Facade panel

According to the inquiry, the system voltage durability for crystalline silicon PV modules (Potential Induced Degradation (PID)) should be tested acc. to IEC TS 62804-1:2025

The required tests of Potential Induced Degradation (PID) were passed according to its regulations of the pass criteria of IEC 61215-2:2021.

Test failures: None

This test report includes a history of reporting, measurement reports and photo documentation in the appendix.

2. Sand & Dust as per IEC 60068-2-68 Section La2, Talc Powder
Testing performed by TRNA approved lab, Tempe, Arizona - USA

No visual anomalies noted
Test samples
MIT25A06444 - M030-CL01F203 (E-Facade panel)
MIT25A06436 - M030-CL01F203 (Honeycomb Solar panel)

3. Cyclic Salt Fog as per IEC EN 60068-2-52 (2017) Method 1
Testing performed by TRNA approved lab - Ridgway, Pennsylvania - USA

4 of 4 Samples exhibiting spotting after 4 cycles of Cyclic Salt Fog testing.

For samples 3 & 4 (framed samples), the frames are uncoated aluminium edges where the frames meet in the corners. These areas are exhibiting slight white corrosion.

There is no corrosion on the glass (front of samples). The glass is exhibiting spotting and streaking.

Samples returned to the Customer for evaluations.

Sample (1) MIT25A06440 - M030-CL01F203 (Honeycomb Solar panel)

Sample (2) MIT25A06433 - M030-CL01F203 (Honeycomb Solar panel)

Sample (3) MIT25A06442 - M030-CL01F203 (E-Facade panel)

Sample (4) MIT25A06446 - M030-CL01F203 (E-Facade panel)

4. Ammonia Corrosion Testing IEC 62716 (2013) Section 7
Testing performed by TRNA approved lab - Ridgway, Pennsylvania - USA

4 of 4 with no defects prior to testing.

Produktbeschreibung
Product description

Following testing, 4 of 4 with samples exhibiting spotting after 480 hours of ammonia corrosion testing. The spotting is present on the glass surface. No evidence of ingress observed. The samples were rinsed with water before doing the inspection.
Sample (1) MIT25A06450 - M030-CL01F203 (Honeycomb Solar panel)
Sample (2) MIT25A06434 - M030-CL01F203 (Honeycomb Solar panel)
Sample (3) MIT25A06452 - M030-CL01F203 (E-Facade panel)
Sample (4) MIT25A06454 - M030-CL01F203 (E-Facade panel)

No pass/fail criteria. Visually inspect the samples for any signs of defect prior to and following exposure. Return the samples to the Customer for additional evaluations.

Deviations: Cycle 2 requires a test temperature of 18°C to 80°C and a maximum humidity of 75%.

Samples were tested at 60°C and uncontrolled humidity.